भारतीय मानक
Indian Standard

IS 2691 : 2017

पकी मिट्टी की प्रफलक ईंट — विशिष्टि

(तीसरा पुनरीक्षण)

Burnt Clay Facing Bricks — Specification

(Third Revision)

ICS 79.060.20

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भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS
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Clay and Stabilized Soil Products for Construction Sectional Committee, CED 30

FOREWORD

This Indian Standard (Third Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Clay and Stabilized Soil Products for Construction Sectional Committee had been approved by the Civil Engineering Division Council.

Facing bricks are used in the exposed face of masonry without any further surface protection. Where external plastering or renderings have to be frequently renewed due to corrosive atmosphere and also for high rise buildings where maintenance of exposed bricks walls is expensive, use of facing bricks prove economical.

This standard was first published in 1964 and subsequently revised in 1972 and 1988. The standard covered two sizes of facing bricks. This revision has been brought out to incorporate the experience gained by usage of this standard during course of these years. In view of the changed architectural requirement in the country, wherein certain new sizes of facing bricks are in sufficient demand and also such demands are presently being met by the manufacturers, this revision of the standard incorporates these new sizes of facing bricks along with tolerances for the same. Further, it was agreed that there is always some variation in kiln firing and therefore it is difficult to obtain uniform brick colour. Also, requirement of thorough burning of the brick is sufficient and some type of non-uniformity in colour is nowadays being given in the facing bricks for aesthetic appearance. Thus, the requirement for uniform colour of bricks has also been deleted in this revision of the standard.

The composition of the Committee responsible for formulation of this standard is given in Annex B.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2 : 1960 ‘Rules for rounding off numerical values (*revised*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard
BURNT CLAY FACING BRICKS — SPECIFICATION
(Third Revision)

1 SCOPE

This standard specifies the dimensions, quality and strength of burnt clay facing bricks used in building and other structures.

2 REFERENCES

The standards listed in Annex A contain provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated in Annex A.

3 TERMINOLOGY

For the purpose of this standard the definitions given in IS 2248 shall apply.

4 GENERAL QUALITY

4.1 The facing bricks shall be made of clay, shale or mixture of these materials with or without admixtures and burnt to meet the requirements of this standard. The colouring material added to the clay shall be of suitable ceramic materials.

4.2 The bricks shall be free from cracks, flaws and nodules of free lime and of even texture. These shall be thoroughly burnt and shall have plane rectangular faces with parallel sides and sharp straight right angled edges.

5 DIMENSIONS AND TOLERANCES

5.1 The standard sizes of the facing bricks shall be 300 × 100 × 50 mm, 230 × 110 × 75 mm, 190 × 90 × 90 mm and 190 × 90 × 40 mm.

5.2 The permissible tolerances shall be as follows:

Dimension mm	*Tolerance* mm
300	±6
230	±4
190	±3
110	±2
100	±2
90	±2
75	±2
50	±2
40	±2

6 PHYSICAL REQUIREMENTS

6.1 The average compressive strength of bricks, when determined in accordance with the procedure described in IS 3495 (Part 1) shall not be less than 10 N/mm^2 (100 kgf/cm^2 approximately).

6.2 The average water absorption of bricks when tested in accordance with the procedure laid down in IS 3495 (Part 2) after immersion in water for 24 h, shall not exceed 15 percent by mass.

6.3 The efflorescence rating of bricks when tested in accordance with the procedure laid down in IS 3495 (Part 3), shall be 'NIL'.

6.4 When measured in accordance with the procedure specified in IS 3495 (Part 4), the warpage shall not exceed 2.5 mm.

7 SAMPLING AND CRITERIA FOR CONFORMITY

The method of sampling and the criteria for conformity shall be in accordance with the procedure laid down in IS 5454.

8 MARKING

8.1 Each brick shall be marked in a suitable manner with the manufacturer's identification mark or initials.

8.2 BIS Certification Marking

Each brick may also be marked with the Standard Mark.

8.2.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act*, 1986 and the Rules and Regulations made thereunder. The details of conditions under which the license for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

ANNEX A

(*Clause* 2)

LIST OF REFERRED INDIAN STANDARDS

IS No.	*Title*
2248 : 1992	Glossary of terms relating to clay products for buildings (*second revision*)
3495	Methods of tests of burnt clay building bricks:
(Part 1) : 1992	Determination of compressive strength (*third revision*)
(Part 2) : 1992	Determination of water absorption (*third revision*)
(Part 3) : 1992	Determination of efflorescence (*third revision*)
(Part 4) : 1992	Determination of warpage (*third revision*)
5454 : 1978	Methods for sampling of clay building bricks (*first revision*)

ANNEX B

(*Foreword*)

COMMITTEE COMPOSITION

Clay and Stabilized Soil Products for Construction Sectional Committee, CED 30

Organization	*Representative(s)*
CSIR — Central Building Research Institute, Roorkee	Dr A. K. Minocha (***Chairman***)
A.P. Engineering Research Laboratories, Hyderabad	Shrimati J. Sridevi Shri P. John Victor (*Alternate*)
All India Brick and Tile Manufacturers Federation, New Delhi	Shri R. P. S. Chandel Shri R. K. Verma (*Alternate*)
Building Materials and Technology Promotion Council, New Delhi	Shri J. K. Prasad Shri C. N. Jha (*Alternate*)
Central Public Works Department, New Delhi	Shri V. K. Rokade Shri Mathura Prasad (*Alternate*)
Central Soil and Materials Research Station, New Delhi	Shri S. L. Gupta Shri N. V. Mahure (*Alternate*)
CSIR — Central Building Research Institute, Roorkee	Dr A. K. Minocha Shri L. P. Singh (*Alternate*)
CSIR — Central Glass and Ceramic Research Institute (CGCRI), Khurja	Dr C. S. Prasad Shri Yad Ram (*Alternate*)
CSIR — North East Institute of Science and Technology, Jorhat	Dr Pinaki Sengupta Shri Pranab Barakakati (*Alternate*)
Delhi Development Authority, New Delhi	Chief Engineer (Design) Shri Lachhman Singh (*Alternate*)
Development Alternatives, New Delhi	Dr Soumen Maity Shri Ayan Kumar Keora (*Alternate*)
Engineer-in-Chief's Branch, Army HQ (MES), New Delhi	Shrimati Upinder Kaur Shri J. Thakur (*Alternate*)
Fly Ash Unit (Ministry of Science & Technology), New Delhi	Dr Chander Mohan
Gujarat Engineering Research Institute, Vadodara	Shri B. M. Rao Shri Kamalanayan L. Dave (*Alternate*)
Housing and Urban Development Corporation Limited, New Delhi	Shri Samir Mitra Shri Rajesh Sharma (*Alternate*)
Indian Institute of Science, Bengaluru	Prof B. V. Venkatarama Reddy Dr K. S. Nanjunda Rao (*Alternate*)
National Test House, Kolkata	Shri D. V. S. Prasad Shri Naresh Gupta (*Alternate*)
NBCC India Limited, New Delhi	Shri Rajendra Chaudhari Shri H. K. Dhawan (*Alternate*)
NTPC Limited, Noida	Shri Jitendra Kumar
Public Works Department, Govt of Tamil Nadu, Chennai	Superintending Engineer Executive Engineer (*Alternate*)
The Bricks & Tiles Manufacturers Association, Chennai	Shri G. Gajendiran Shri P. Deenadayalu (*Alternate*)
The Commonwealth Trust (India), Kozhikode	Shri M. G. Gopinath Shri Babin P. (*Alternate*)
The Energy and Resources Institute (TERI), New Delhi	Shri Sachin Kumar Shrimati Sudipta Singh (*Alternate*)

Organization	*Representative(s)*
Wienerberger India Private Ltd, Bengaluru	Shri Kundan B. Dighe Shri D. J. Jagadeesha (*Alternate*)
BIS Directorate General	Shri B. K. Sinha, Scientist E and Head (Civil Engg) [Representing Director General (*Ex-officio*)]

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Scientist D (Civil Engg), BIS

and

Shrimati Madhurima Madhav
Scientist C (Civil Engg), BIS

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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